

REMARKS

The status of the claims in the application is as follows:

Claims / Section	35 U.S.C. Sec.	References / Notes
7, 8, 28 and 30		<ul style="list-style-type: none">• Allowed
1, 2, 5, 6, 9-11, 15-17, 20-24, 28, 29 & 31-35	§103(a) Obviousness	<ul style="list-style-type: none">• Hagström, et al. (U.S. Patent No. 6,185,434); and• Admitted Prior Art (APA).

Applicant thanks the Examiner for indicating the allowability of claims 7, 8, 28
5 and 30. Applicant has canceled claims 20, 21, 22 and 24, and has added claim 36 with this amendment, and has provided discussion for distinguishing the remaining pending claims from the art cited against it.

Applicant's use of reference characters below is for illustrative purposes only and is not intended to be limiting in nature unless explicitly indicated.

10 **35 U.S.C. §103 (a), CLAIMS 1, 2, 5, 6, 9-11, 15-17, 20-24, 28, 29 & 31-35**
 OBVIOUSNESS OVER HAGSTRÖM AND APA

In the OA, on pp. 2-4, the Examiner stated that claim 1 of the present invention is obvious over Hagstrom and the Admitted Prior Art (APA).

The Examiner indicated that Hagstrom discloses each feature of independent
15 claim 1, noting that:

It would have been obvious to one of ordinary skill in the art at the time of this application to implement any number of parallel transmission systems with any combination of known band-pair signaling modes (GSM,
20 FDD/TDD, DECT, pure FDD, or pure TDD), including the

associated switching and multi-port filtering circuitry for the advantage of providing maximum compatibility with the system in which the phone is to be used.

The Examiner then further applied the APA and stated:

5 Applicant's admitted prior art discloses that multiple
switches may be used in known multi-band system in lieu
of a diplexer (multi port filtering circuit) for the advantage
that the system may implement standards whose
frequencies are closer to (adjacent) to each other
10 (applicant's specification page 2 lines 10-25). Hagstrom
further discloses a deficiency in his system that the
multiport filter only supports different signaling modes
with sufficient separation. It would have been obvious to
one of ordinary skill in the art at the time of this
15 application to implement a multiple switch in lieu of the
multiport filter for the advantage of being able to support
signaling modes whose frequency ranges are closer
together.

20 Examiner further notes that 'multi-band' and 'multi-mode'
interfaces are the same for the reason that, as far as the
front end (such as Fig. 5 of Hagstrom) is concerned, the
only difference in the transmission systems is the
operating frequency range (all the signals are either
switched or frequency filtered before being digitized). As
25 such, the interface would treat a set of signaling
standards in the same manner regardless of whether
they belonged to a 'multi-band' or 'multi-mode' system
('bands' and 'modes' are just signaling standards defined
by a frequency range).

30 With regard to the APA, it is admitted in paragraph [0005] that a multiple
switch can be used to separate signals of different mobile systems from one
another. However, there is indication that multiple switches could be used for
separating TX/RX signals attributed to the same, mobile system. On the contrary, in
the present invention as claimed in claims 1 and 31 respectively, a multiple switch is
35 used to switch between different mobile systems as well as to separate a receive
and a transmit band of same mobile system operating in a pure TDD mode.

In Fig. 5 of Hagström, a triplexer 51 is provided in order to replace undesirable switches shown in Fig. 4. The triplexer 51 comprises a diplexer for separating the DECT path and the GSM path, and a duplexer for separating the TX/RX of the GSM path, wherein both the diplexer and duplexer comprise passive electrical components. Eliminating semiconductor switching components is advantageous in view of minimizing the energy consumption and the production costs. Therefore, one of ordinary skill in the art would not replace the triplexer 51 by a semiconductor component such as a multiple switch. Such a person would not replace a combination of a triplexer 51 and a switch 14 shown in Fig. 5 of Hagström by a single switch since the sufficient isolation of TX/RX sub-paths of a first path from the second path could be problematic in this case. Therefore, using a multiple switch for this purpose is inventive in view of Hagström and the APA of the specification of the present patent application, as indicated by the Examiner.


For this above reasons, Applicant asserts that the claim language and arguments presented above clearly distinguishes over the prior art, and respectfully requests that the Examiner withdraw the 35 U.S.C. §103(a) rejection from the present application.

CONCLUSION

Inasmuch as each of the rejections have been overcome by the amendments and arguments presented, and all of the examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that this application be passed to issue.

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Respectfully submitted,

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